



THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

QUIGLEY *et al.*

Appl. No.: 09/780,179

Filed: February 9, 2001

For: **Robust Techniques For Optimal  
Upstream Communication Between  
Cable Modem Subscribers And A  
Headend**

Confirmation No.: 9211

Art Unit: 2661

Examiner: Ian N. Moore

Atty. Docket: 1875.132000I

**Second Supplemental Information Disclosure Statement**

***Mail Stop Amendment***

Commissioner for Patents  
PO Box 1450  
Alexandria, VA 22313-1450

Sir:

Listed on accompanying IDS Forms are documents that may be considered material to the examination of this application, in compliance with the duty of disclosure requirements of 37 C.F.R. §§ 1.56, 1.97 and 1.98.

Applicants have listed publication dates on the attached IDS Forms based on information presently available to the undersigned. However, the listed publication dates should not be construed as an admission that the information was actually published on the date indicated.

Applicants reserve the right to establish the patentability of the claimed invention over any of the information provided herewith, and/or to prove that this information may not be prior art, and/or to prove that this information may not be enabling for the teachings purportedly offered.

This statement should not be construed as a representation that a search has been made, or that information more material to the examination of the present patent

application does not exist. The Examiner is specifically requested not to rely solely on the material submitted herewith.

Applicants have checked the appropriate boxes below.

- 1. Statement under 37 C.F.R. 1.704(d). Each item of information contained in this Information Disclosure Statement was first cited in a communication from a foreign patent office in a counterpart application and this communication was not received by any individual designated in 37 C.F.R. § 1.56(c) more than thirty days prior to the filing of this information disclosure statement.
- 2. Filing under 37 C.F.R. § 1.97(b). This Information Disclosure Statement is being filed within three months of the date of filing of a national application other than a continued prosecution application (CPA), OR within three months of the date of entry of the national stage as set forth in 37 C.F.R. § 1.491 in an international application, OR before the mailing date of a first Office Action on the merits OR before the mailing of a first Office Action after the filing of a request for continued examination under 37 C.F.R. § 1.114. No statement or fee is required.
- 3. Filing under 37 C.F.R. § 1.97(c). This Information Disclosure Statement is being filed more than three months after the U.S. filing date AND after the mailing date of the first Office Action on the merits, but before the mailing date of a Final Rejection, or Notice of Allowance, or an action that otherwise closes prosecution in the application.
  - a. Statement under 37 C.F.R. § 1.97(e)(1). I hereby state that each item of information contained in this Information Disclosure

Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(1).

- b. Statement under 37 C.F.R. § 1.97(e)(2). I hereby state that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(2).
  - c. Attached is our PTO-2038 Credit Card Payment Form in the amount of \$ \_\_\_\_\_ in payment of the fee under 37 C.F.R. § 1.17(p).
4. Filing under 37 C.F.R. § 1.97(d) This Information Disclosure Statement is being filed more than three months after the U.S. filing date and after the mailing date of a Final Rejection or Notice of Allowance, but before payment of the Issue Fee. Enclosed find our PTO-2038 Credit Card Payment Form in the amount of \$ \_\_\_\_\_ in payment of the fee under 37 C.F.R. § 1.17(p); in addition:

- a. Statement under 37 C.F.R. § 1.97(e)(1). I hereby state that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than

three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(1).

- b. Statement under 37 C.F.R. § 1.97(e)(2). I hereby state that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. § 1.97(e)(2).
5. The document(s) was/were cited in a search report by a foreign patent office in a counterpart foreign application. Submission of an English language version of the search report that indicates the degree of relevance found by the foreign office is provided in satisfaction of the requirement for a concise explanation of relevance. 1138 OG 37, 38.
6. A concise explanation of the relevance of the non-English language document(s) appears below in accordance with 37 C.F.R. § 1.98(a)(3).
7. Copies of documents FP1 and NPL1-NPL6 are submitted. However, in accordance with 37 C.F.R. § 1.98(a)(2), no copies of U.S. patents and patent application publications cited on the attached IDS Forms are submitted.
8. Copies of the documents were cited by or submitted to the Office in an IDS that complies with 37 C.F.R. § 1.98(a)-(c) in Application No. \_\_\_\_\_, filed

\_\_\_\_\_, which is relied upon for an earlier filing date under 35 U.S.C. § 120. Thus, copies of these documents are not attached. 37 C.F.R. § 1.98(d).

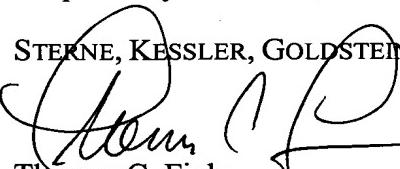
9. It is expected that the examiner will review the prosecution and cited art in the parent application no(s). 09/574,558 and 09/430,821 in accordance with MPEP 2001.06(b), and indicate in the next communication from the office that the art cited in the earlier prosecution history has been reviewed in connection with the present application.

It is respectfully requested that the Examiner initial and return a copy of the enclosed IDS Forms, and indicate in the official file wrapper of this patent application that the documents have been considered.

The U.S. Patent and Trademark Office is hereby authorized to charge any fee deficiency, or credit any overpayment, to our Deposit Account No. 19-0036.

Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

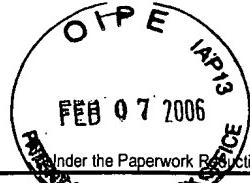


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Equivalent of Form PTO/SB/08A (07-05)

Approved for use through 07/31/2006.

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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Substitute for form 1469 <b>SECOND SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(Use as many sheets as necessary)</i>				<b>Complete if Known</b>	
				Application Number	09/780,179
				Filing Date	February 9, 2001
				First Named Inventor	Thomas J. QUIGLEY
				Art Unit	2661
				Examiner Name	Ian N. Moore
Sheet	1	of	2	Attorney Docket Number	1875.132000I

<b>U.S. PATENT DOCUMENTS</b>					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (If Known)	MM-DD-YYYY		
	US1	3,839,678	10-01-1974	Bell	
	US2	5,276,706	01-04-1994	Critchlow	
	US3	5,533,004	07-02-1996	Jasper et al.	
	US4	5,553,064	09-03-1996	Paff et al.	
	US5	5,612,975	03-18-1997	Becker et al.	
	US6	5,703,539	12-30-1997	Gillig et al.	
	US7	5,859,671	01-12-1999	Kim	
	US8	5,903,231	05-11-1999	Emelko	
	US9	6,005,854	12-21-1999	Xu et al.	
	US10	6,028,860	02-22-2000	Laubach et al.	
	US11	6,055,242	04-25-2000	Doshi et al.	
	US12	6,215,792 B1	04-10-2001	Abi-Nassif	
	US13	6,298,098 B1	10-02-2001	Krasner et al.	
	US14	6,353,604 B2	03-05-2002	Grimwood et al.	
	US15	6,459,703 B1	10-01-2002	Grimwood et al.	
	US16	6,529,520 B1	03-04-2003	Lee et al.	
	US17	6,546,017 B1	04-08-2003	Khaunte	
	US18	6,563,829 B1	05-13-2003	Lyles et al.	
	US19	6,614,799 B1	09-02-2003	Gummalla et al.	
	US20	6,647,069 B1	11-11-2003	Segal et al.	

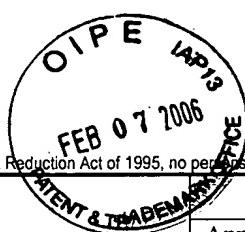
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		Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)	MM-DD-YYYY		
	FP1	WO 98/47236 A1	10-22-1998	Eng	T <sup>6</sup>
	FP2				
	FP3				
	FP4				
	FP5				
	FP6				
	FP7				
	FP8				
	FP9				

Examiner Signature	Date Considered
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup>Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup>For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup>Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup>Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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Substitute for form 1449/PTO

**SECOND SUPPLEMENTAL  
INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**  
*(Use as many sheets as necessary)*

Sheet

2

of

2

**Complete if Known**

Application Number

09/780,179

Filing Date

February 9, 2001

First Named Inventor

Thomas J. QUIGLEY

Art Unit

2661

Examiner Name

Ian N. Moore

Attorney Docket Number

1875.1320001

**U.S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)			
	US21	6,647,070 B1	11-11-2003	Shalvi et al.	
	US22	6,650,624 B1	11-18-2003	Quigley et al.	
	US23	6,650,698 B1	11-18-2003	Liau et al.	
	US24	6,704,932 B1	03-09-2004	Matsunaga et al.	
	US25	6,785,252 B1	08-31-2004	Zimmerman et al.	
	US26	6,961,314 B1	11-01-2005	Quigley et al.	
	US27	6,965,616 B1	11-15-2005	Quigley et al.	
	US28				
	US29				
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	US31				
	US32				
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	US34				
	US35				
	US36				
	US37				
	US38				
	US39				
	US40				

**FOREIGN PATENT DOCUMENTS**

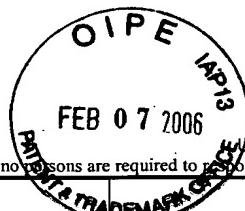
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		Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)				
	FP10					
	FP11					
	FP12					
	FP13					
	FP14					
	FP15					
	FP16					
	FP17					
	FP18					

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Sheet 1 of 1

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First Named Inventor	Thomas J. QUIGLEY
Art Unit	2661
Examiner Name	Ian N. Moore
Attorney Docket Number	1875.132000I

**NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume issue number(s), publisher, city and/or country where published	T <sup>2</sup>
	NPL1	Erup, L. et al., "Interpolation in Digital Modems - Part II: Implementation and Performance," <i>IEEE Transactions on Communications</i> , Vol. 41, No. 6, pp. 998-1008 (June 1993).	
	NPL2	Franks, L.E., "Evaluation of the Effects of Notch Filters on Digital Data Transmission," <i>IEEE Transactions on Communication Technology</i> , pp. 447-449 (August 1970).	
	NPL3	Gardner, F.M., "Interpolation in Digital Modems - Part I: Fundamentals," <i>IEEE Transactions on Communications</i> , Vol. 41, No. 3, pp. 501-507 (March 1993).	
	NPL4	Office Action, dated August 5, 2004, from U.S. Patent Appl. No. 09/430,821, filed October 29, 1999, 25 pages.	
	NPL5	International Search Report, dated October 9, 2000, from PCT Patent Appl. No. PCT/US99/25675, 8 pages.	
	NPL6	Written Opinion, dated November 15, 2000, from PCT Patent Appl. No. PCT/US99/25675, 10 pages.	
	NPL7		
	NPL8		
	NPL9		
	NPL10		

Examiner Signature	Date Considered

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